

RADM Richard Brooks



Commander, Naval Safety Center



Secretary Rumsfeld's Challenge



THE SECRETARY OF DEFENSE
1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

May 19, 2003

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, FORCE TRANSFORMATION
DIRECTOR, NET ASSESSMENT
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Reducing Preventable Accidents

World-class organizations do not tolerate preventable accidents. Our accident rates have increased recently, and we need to turn this situation around. I challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years. ~~These goals are achievable, and will directly increase our operational readiness. We owe no less to the men and women who defend our Nation.~~

I have asked the Under Secretary of Defense for Personnel and Readiness to lead a department-wide effort to focus our accident reduction effort. I intend to be updated on our progress routinely. The USD(P&R) will provide detailed instructions in separate correspondence.



U06916-03

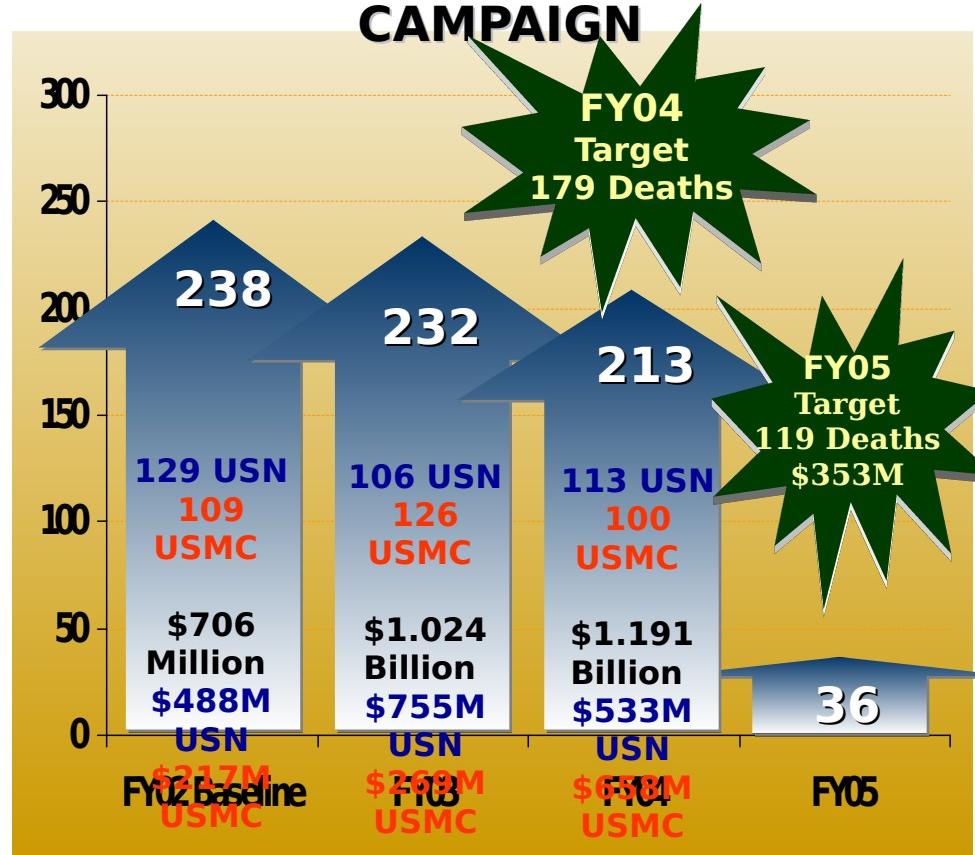
"World-class organizations do not tolerate preventable accidents. Our accident rates have increased recently, and we need to turn this situation around. I challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years." *I challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years.*

Memorandum from Secretary of Defense
19 May 2003

Where We Are

FATALITIES & RESOURCES LOST DURING 50% MISHAP REDUCTION

CAMPAIGN



We have experienced 36 deaths in FY05
(23 USN & 13 USMC)

25 PMV Deaths
(16 USN & 9 USMC)

Our FY05 50% mishap reduction goal is 119.
in FY04!

***OUR ENDSTATE GOAL IS
ZERO!***

NSC Data: 02 December 2004

Magnitude of Accidents

In FY04, Navy and Marine Corps Mishaps Resulted In:

NAVY

- **1 Navy death every 78 hours (3 days)**
- **1 POV death every 120 hours (5 days)**
- **1 Aviation death every 73 days**
- **1 Active duty military injury every 6 hours**
- **1.8 Military members hospitalized every day**
- **11.33 Civilian man-years lost**
- **1 Aircraft destroyed every 41 days**
- **\$1.33 Million a day in aviation losses**

MARINE CORPS

- **1 Marine death every 88 hours (4 days)**
- **1 POV death every 191 hours (8 days)**
- **1 Aviation death every 26 days**
- **1 Active duty military injury every 25 hours**
- **1.9 Military members hospitalized every day**
- **2.53 Civilian man-years lost**
- **1 Aircraft destroyed every 19 days**
- **\$1.74 Million a day in aviation losses**

Areas of Greatest Concern for USN/USMC

***The Largest Challenge: Aviation - Traffic -
Recreation!***



FISCAL YEAR	COST	
	OVERAL L	AVIATI ON
FY00-04	\$4.4M	\$3.8M
FY02	\$683M	\$587M
FY03	\$1.024M	\$956M
FY04	\$1.192B	\$1.123B
FY05	\$160M	\$158M

(\$\$\$ totals represent cost of all reported mishaps and includes cost of fatality IAW DOD 6055 and DOD property loss)

OVERAL L	PMV			DEATHS			% 85	
	%	Air	Afloat	Shore	Air	Afloat	Shore	
1,071	582 54%	90	124	368	149 14%	29	35	
238	140 59%	30	32	78	32 13%	9	5	18
232	119 51%	17	31	71	32 14%	9	6	17
213	119 56%	16	20	83	32 15%	4	9	19
36	25 69%	3	6	16	5 14%	1	1	3

NSC Data: 02 December 2004

Commander's Assessment

TOP CONCERNS

- Off-Duty (PMV, REC) the challenge
- 50% Mishap Reduction Campaign NOT consistently reaching deckplates
- Cultural change takes time

● Status Quo Will Not Get the Job Done.

Good programs exist and have produced some good results, but...

● Leadership and Accountability Required.

with appropriate intrusive leadership and involvement at every level.

● Cradle to Grave Training as Long-Term Fix.

5 Vector Model being worked by Navy Center for Personal Development.

● Safety Center & Navy-Marine Corps Focus.

Predictive and Preparative vice Reactive.

● Utilize All Available Safety Resources.

Army Safety Management Information System, Traffic Safety Toolbox, Leave/Liberty Risk Assessments, etc.

● Emphasize Safety and Risk Management “24x7.”

A way of life. Not a concept that gets increased emphasis post-mishap.

● Balanced Acquisition Approach.

Balanced acquisition approach for platforms and COTS/emergent technologies to reduce mishaps.

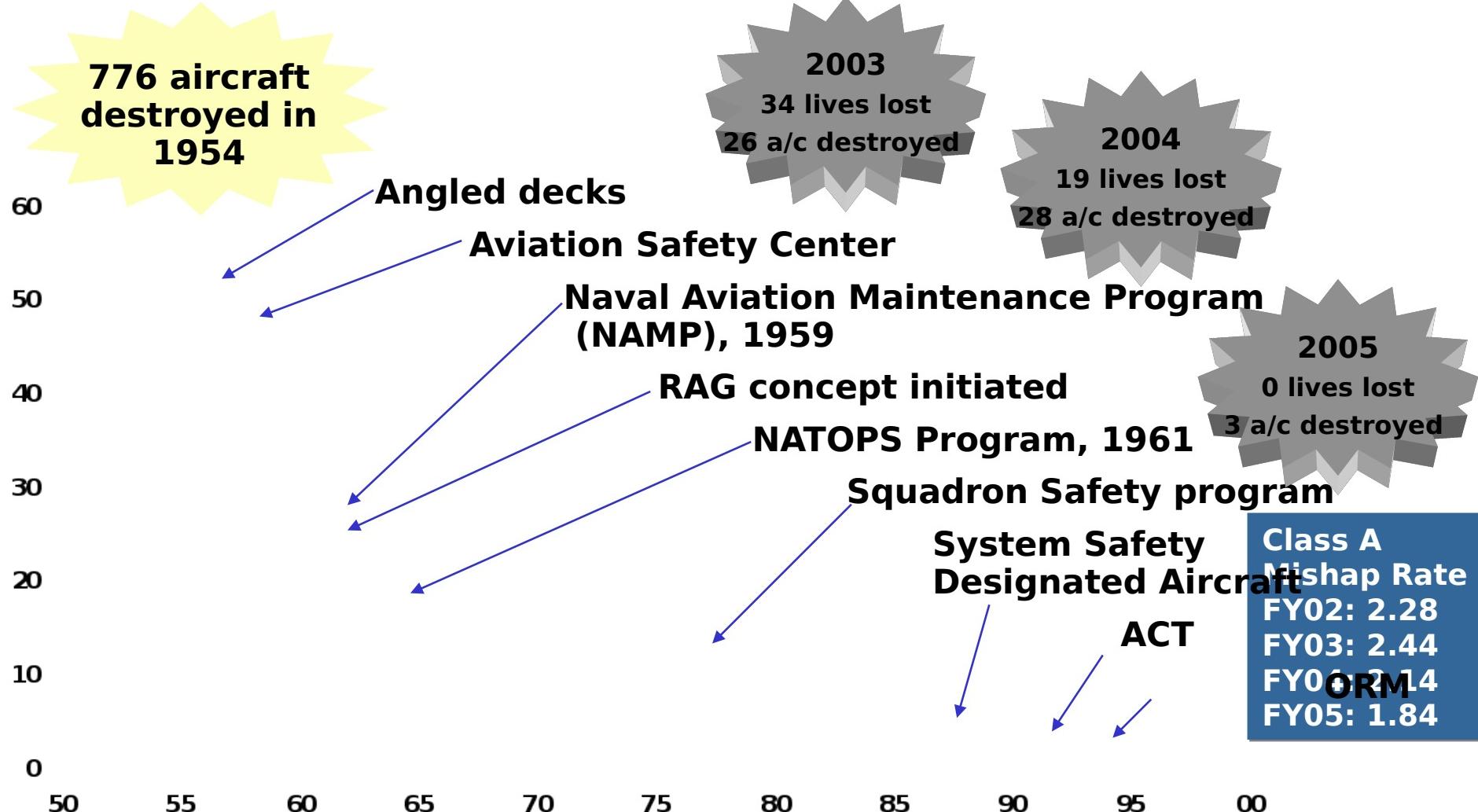
● ORM is Getting There, But More to Do to Ingrain It On and Off-

Duty.

Bottom Line PLATFORM MISHAP REDUCTION - ACHIEVABLE. OFF-DUTY - HARD

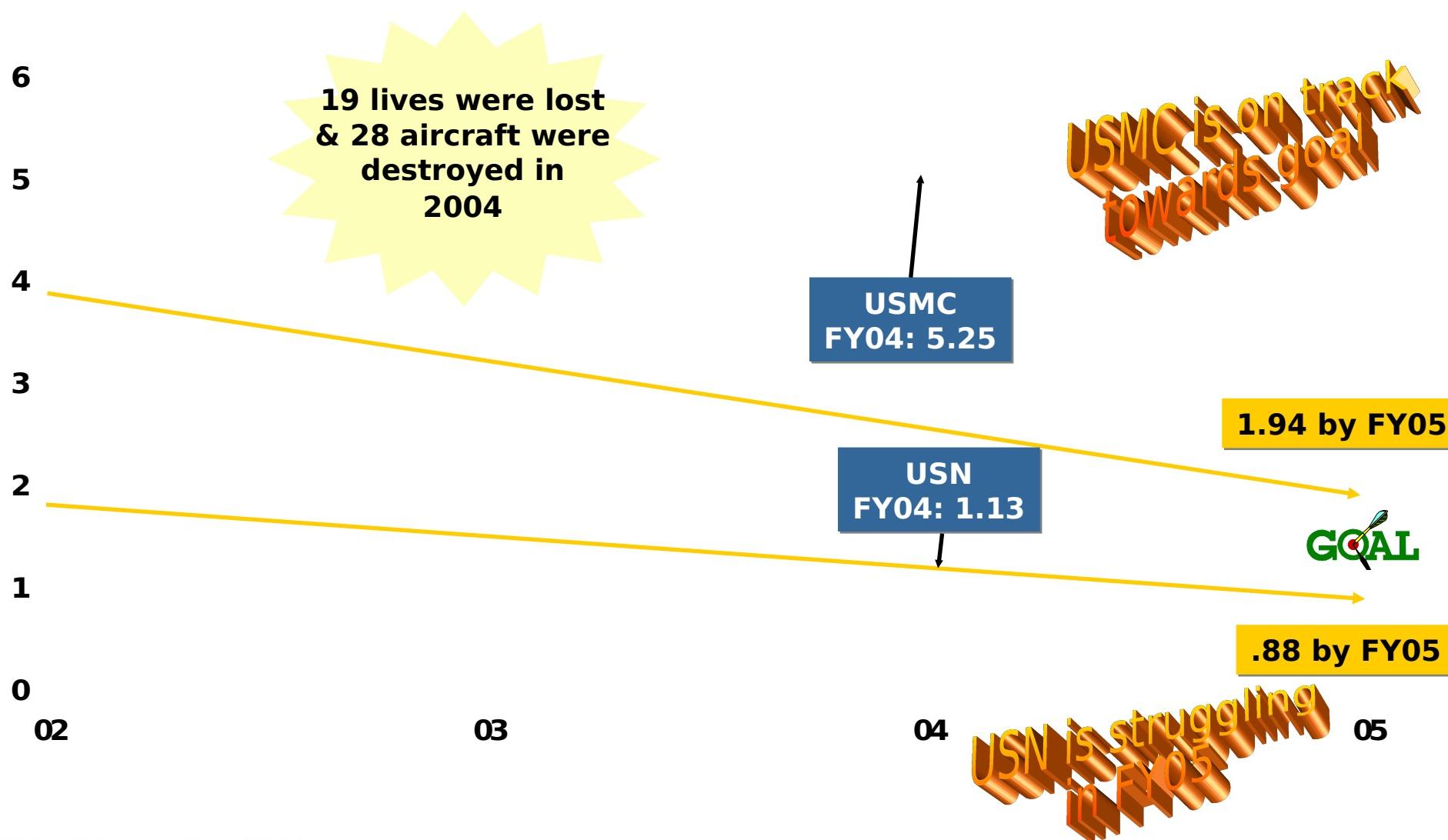
Naval Aviation Mishap History

USN/USMC, FY50-05



Naval Aviation Mishap Trend

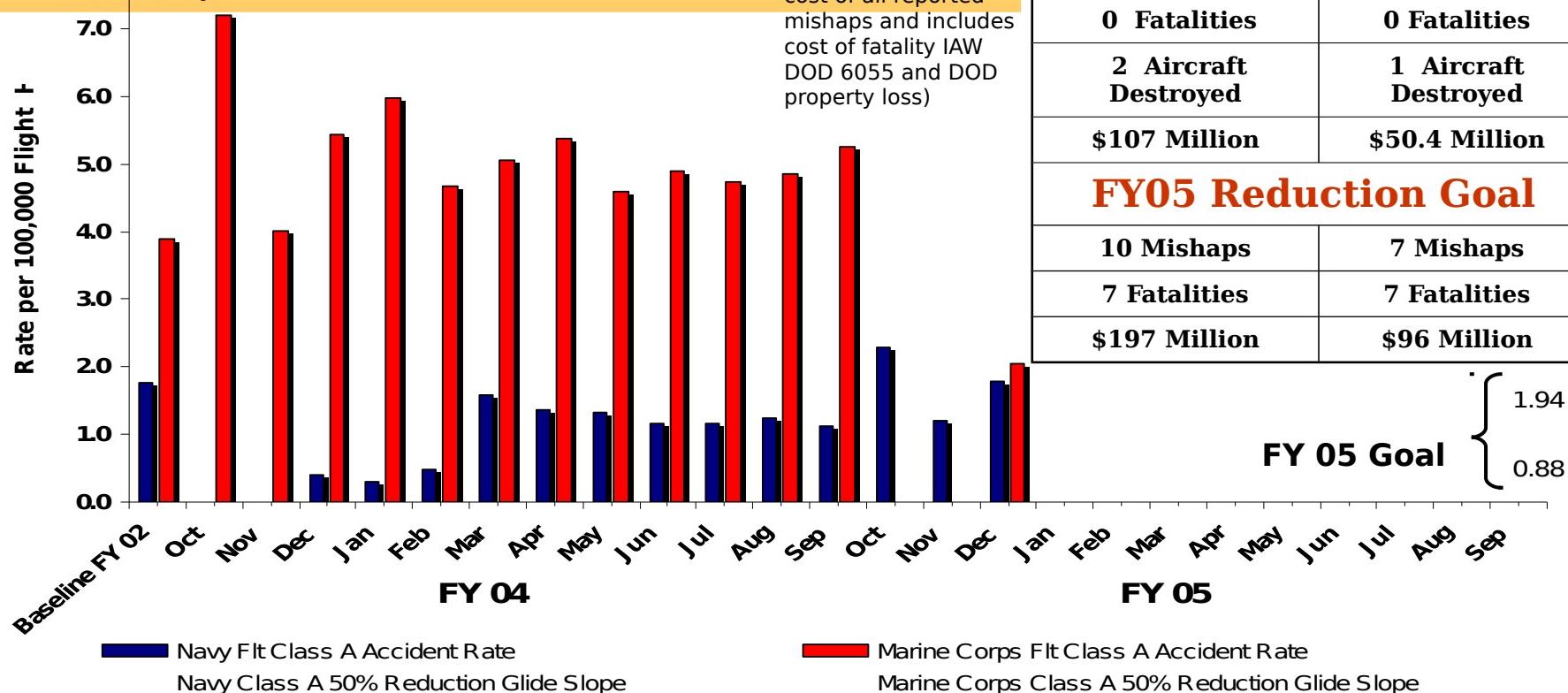
USN/USMC, FY02-04



Status Check (Class-A Flight Mishaps)

Leading Causal Factors

- Human Error (89%)
 - Aircrrew (breakdown in Crew Resource Management, poor decision making, failure to properly perform emergency procedures)
 - Supervisory (failure to provide adequate guidance and training)
- Material/Systems Malfunction (11%)
 - Material/component catastrophic failure (no human error involved)



FY04 Losses

USN	USMC
12 Mishaps	18 Mishaps
5 Fatalities	14 Fatalities
9 Aircraft Destroyed	19 Aircraft Destroyed
\$487 Million	\$636 Million

FY05 Losses

3 Mishaps	1 Mishap
0 Fatalities	0 Fatalities
2 Aircraft Destroyed	1 Aircraft Destroyed
\$107 Million	\$50.4 Million

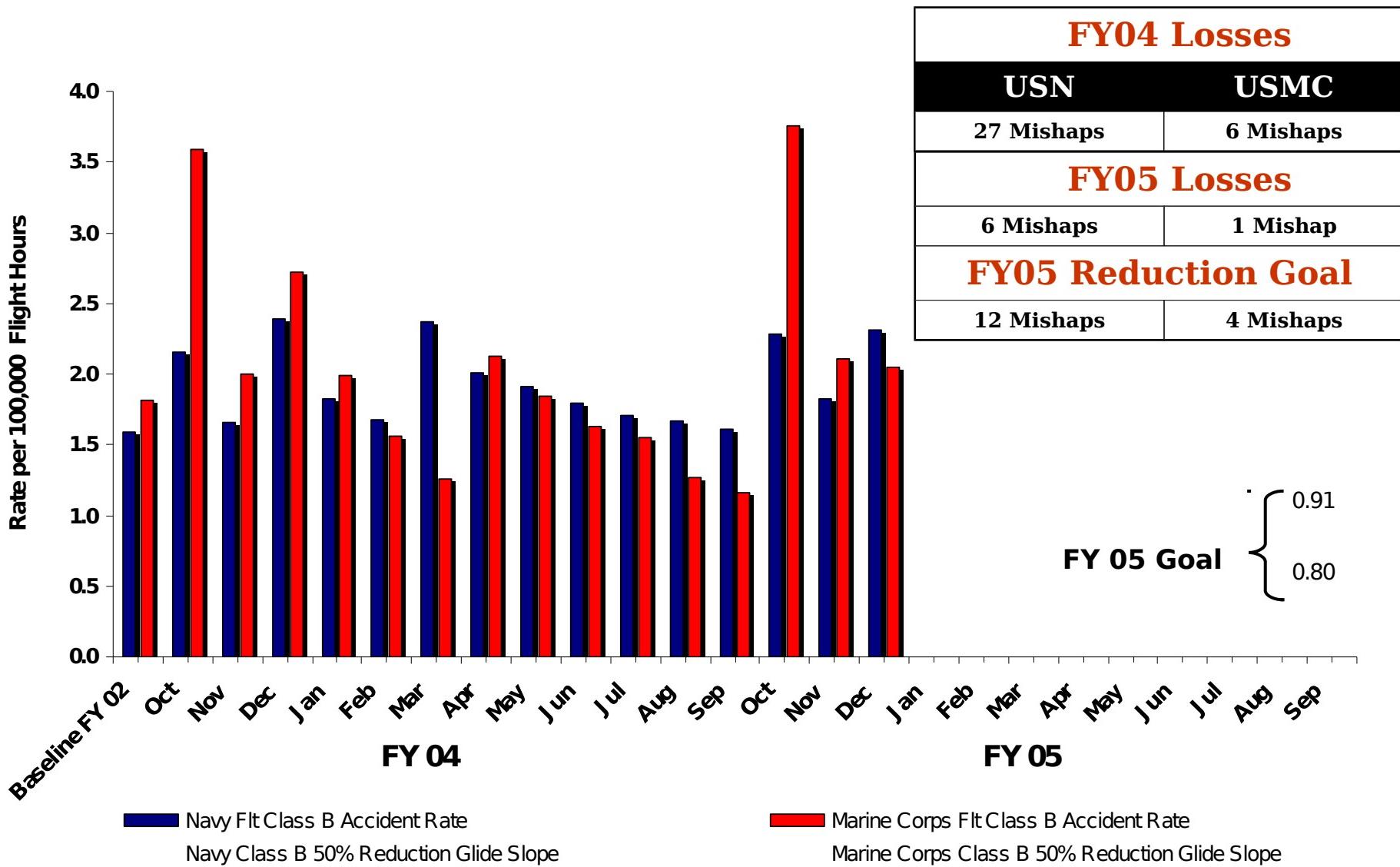
FY05 Reduction Goal

10 Mishaps	7 Mishaps
7 Fatalities	7 Fatalities
\$197 Million	\$96 Million

FY 05 Goal
1.94
0.88

Status Check (Class-B Flight Mishaps)

1 year remains...



Human Error..... The Major Problem



*Almost 9 out of 10 USN/USMC Class-A Flight
Mishaps
(FY97-01) involved human error.*

Human Error

USN/USMC, FY98-03

No. of Class-A Mishaps

USN Aviation



120 of 133

→ HE 90%

Non-
HE
10%

USMC Aviation



62 of 71

→ HE 87%

Non-
HE
13%

Navy Afloat



48 of 51

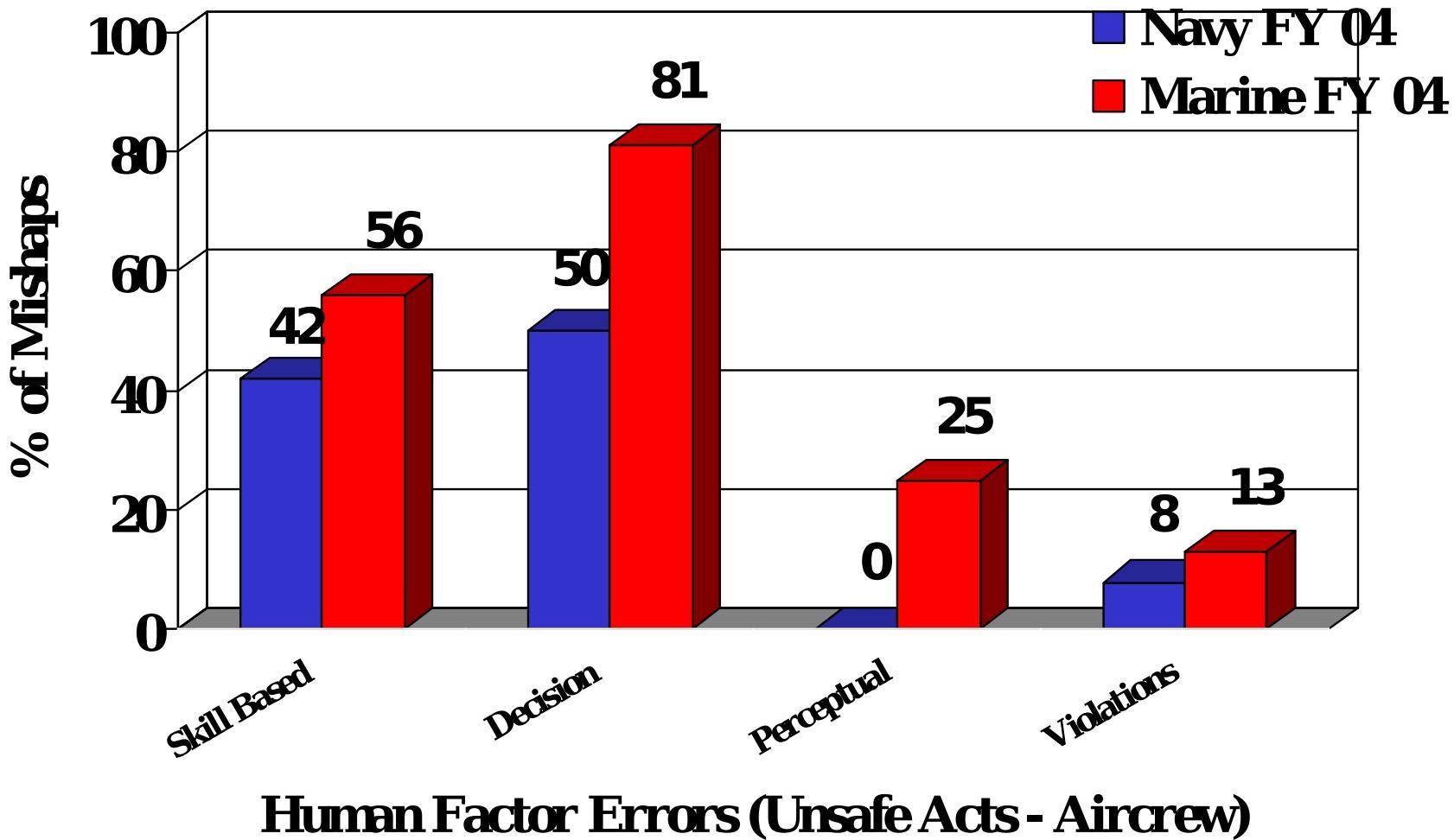
→ HE 94%

Non-
HE
6%

Human Error

Human Factor Errors (FY04)

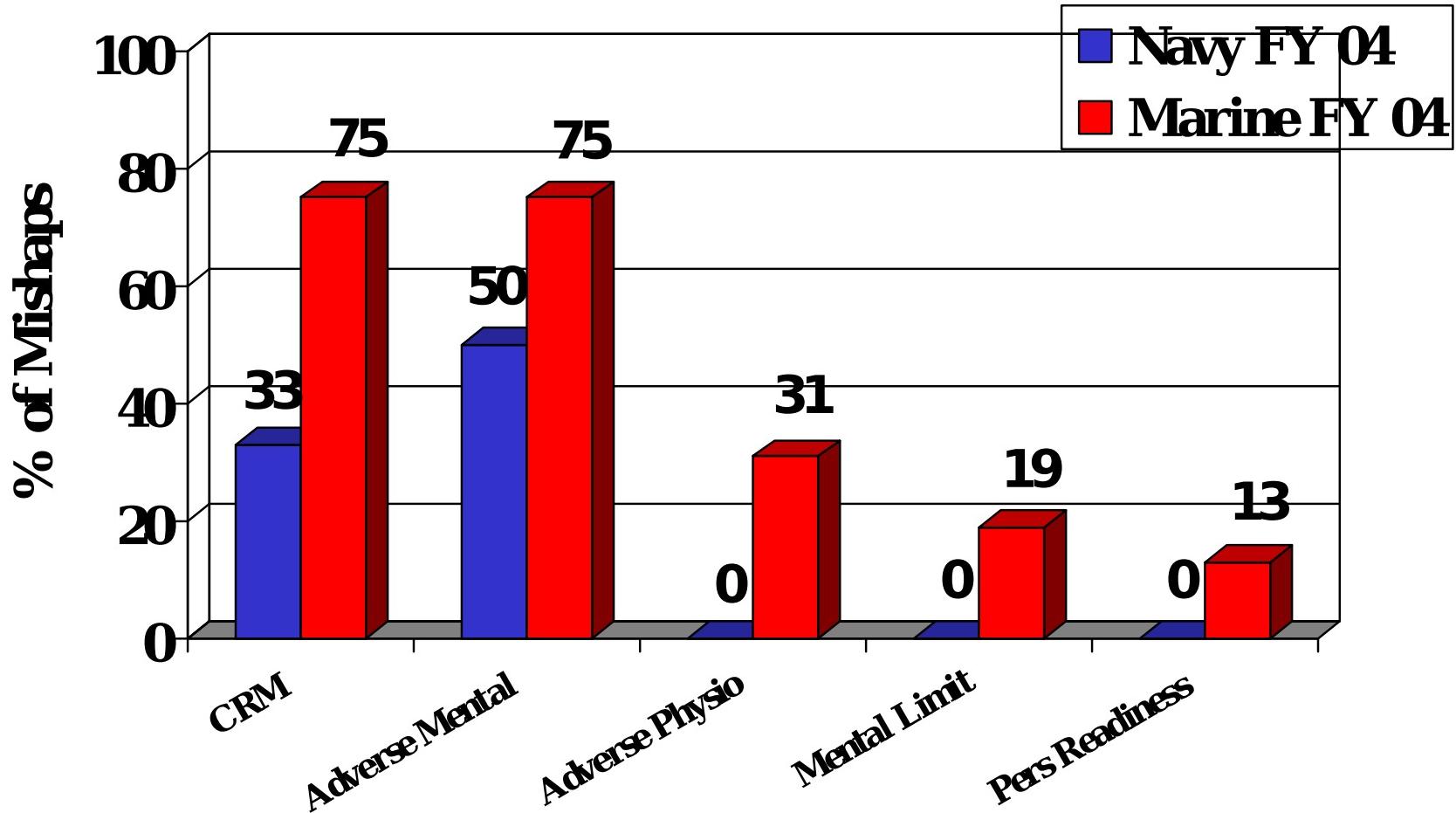
Unsafe Acts - AircREW



Human Factor Errors (Unsafe Acts - AircREW)

Human Factor Errors (FY04)

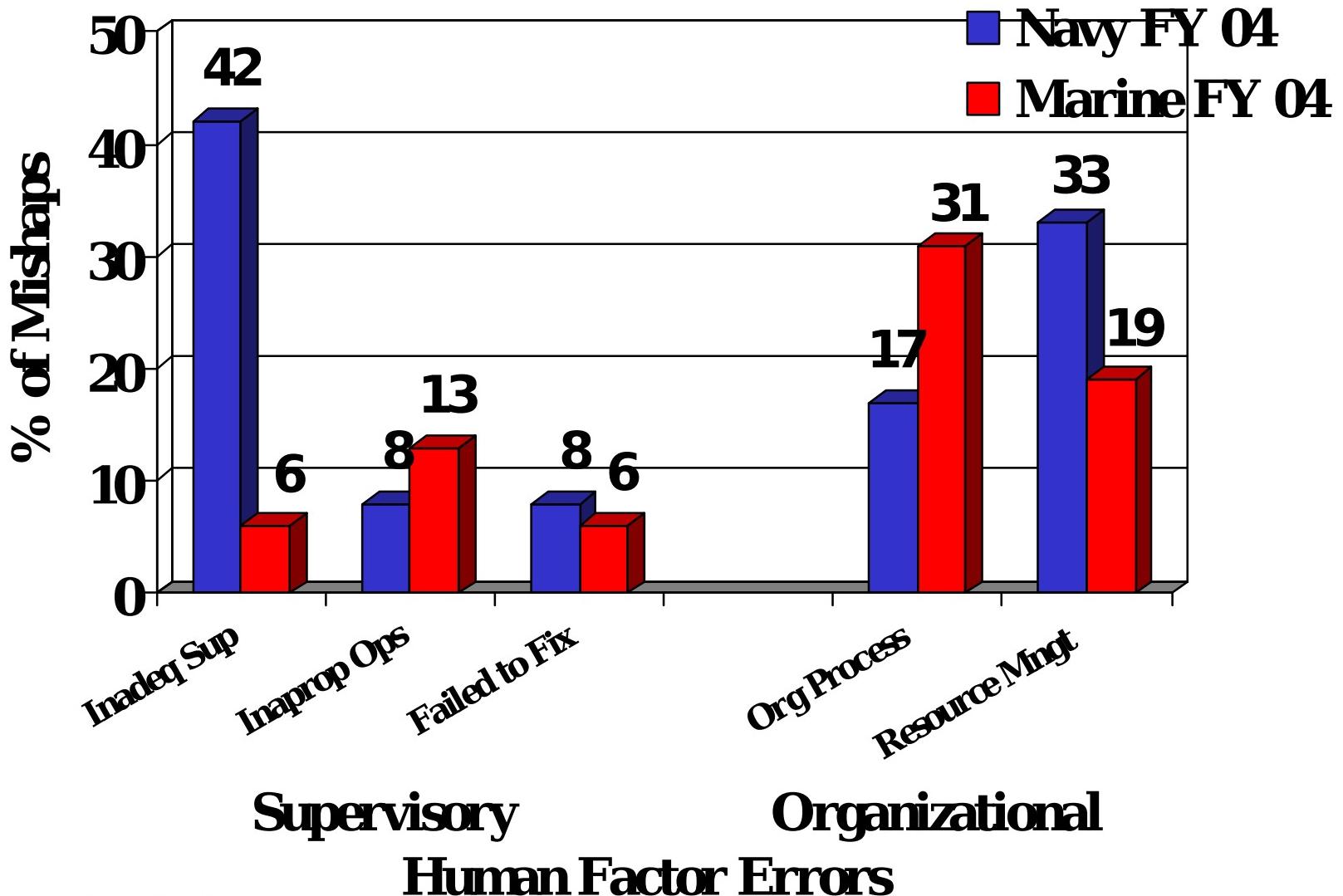
Preconditions - AircREW



Human Factor Errors (Preconditions - AircREW)

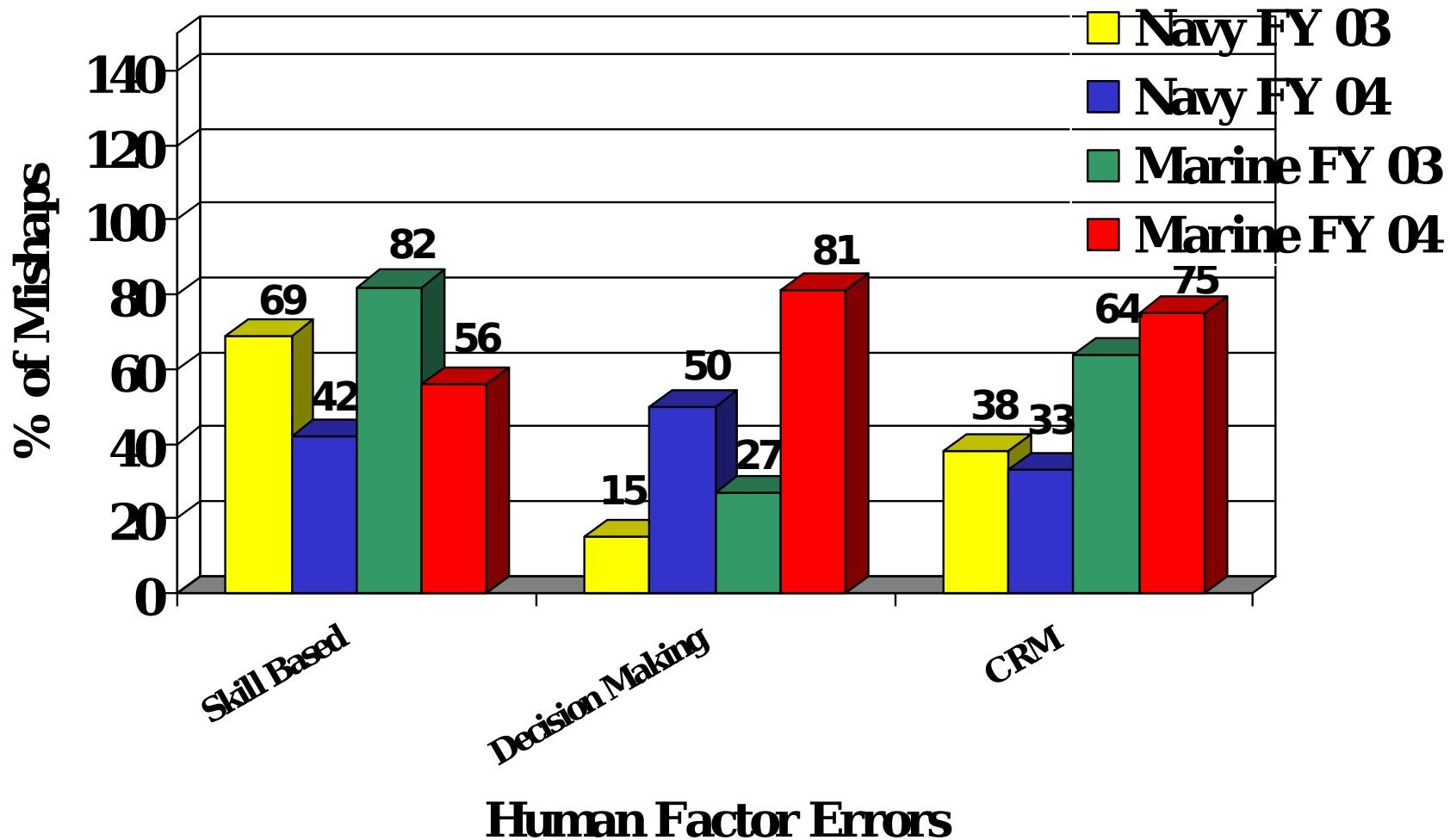
Human Factor Errors (FY04)

Supervisory and Organization



Human Factor Errors

FY 04 compared to FY 03



Human Factor Errors

AVIATION

TRENDS

Investigations

- **Human error (aircrew): Leading causal factor**
 - Skill-based errors

Survey failures

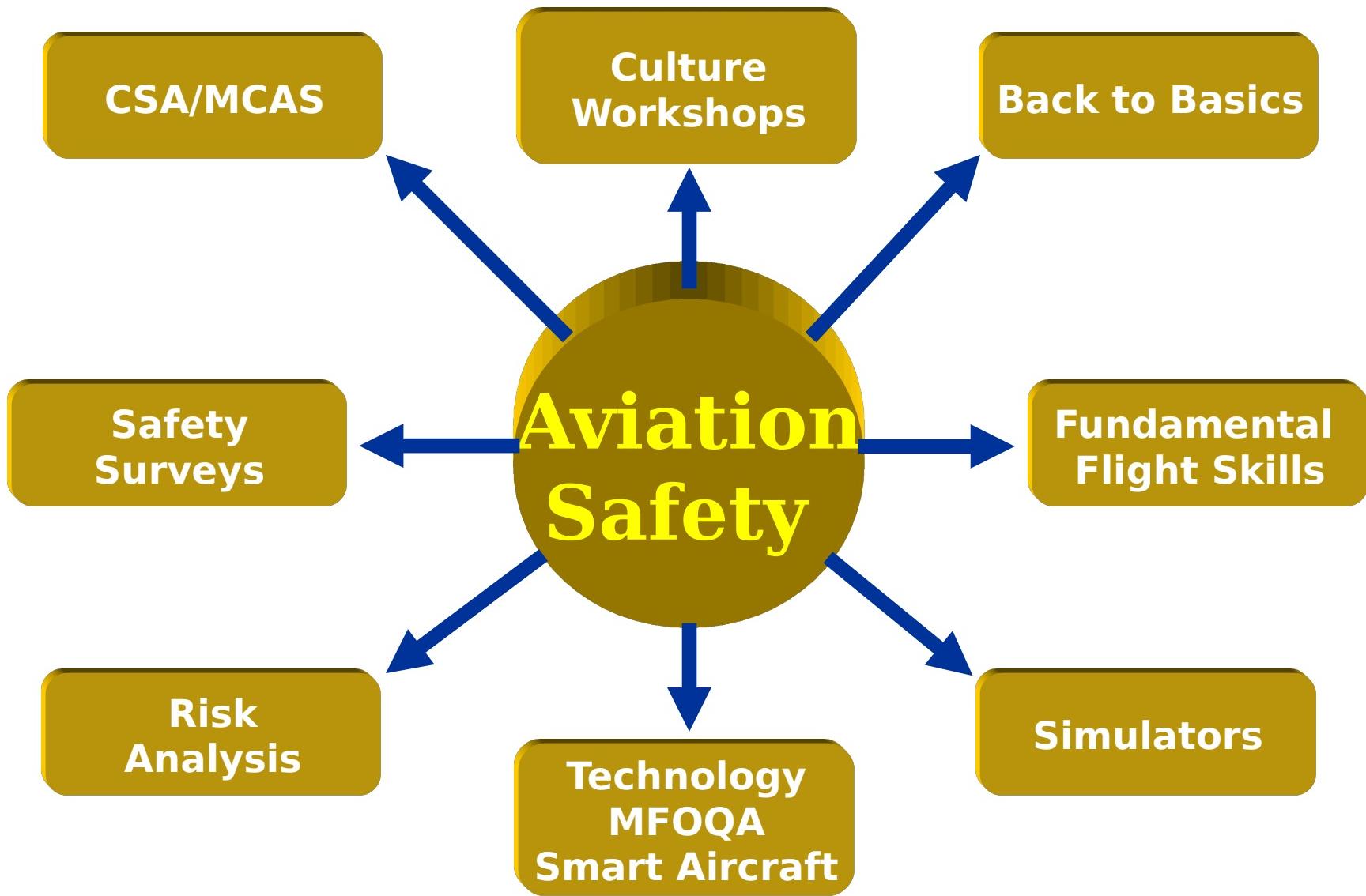
- Many ~~inexperienced~~ experience
- Training quality/quantity
- NATOPS/technical pubs
- Cannibalization

TAKEAWAYS

- Fund state-of-art simulators and data centric systems
- Improve training
- Increase proficiency
- Institutionalize ORM
- Enforce standards
- Increase checks and balances



Aviation Intervention Strategies



Survey Takeaways **FY 2003**

**Safety Surveys on 90+ aviation co
revealed:**

- ✓ Aviation HAZREP submissions
- ✓ NAMP Program Knowledge/Compliance
- ✓ High OPTEMPO (real vs perceived pressure)
- ✓ Manning vs Utilization
- ✓ Flight Surgeon availability

Command Safety Assessment / Maintenance Climate Assessment Surveys

902 CSA's (approx. 30,500 aircrew)

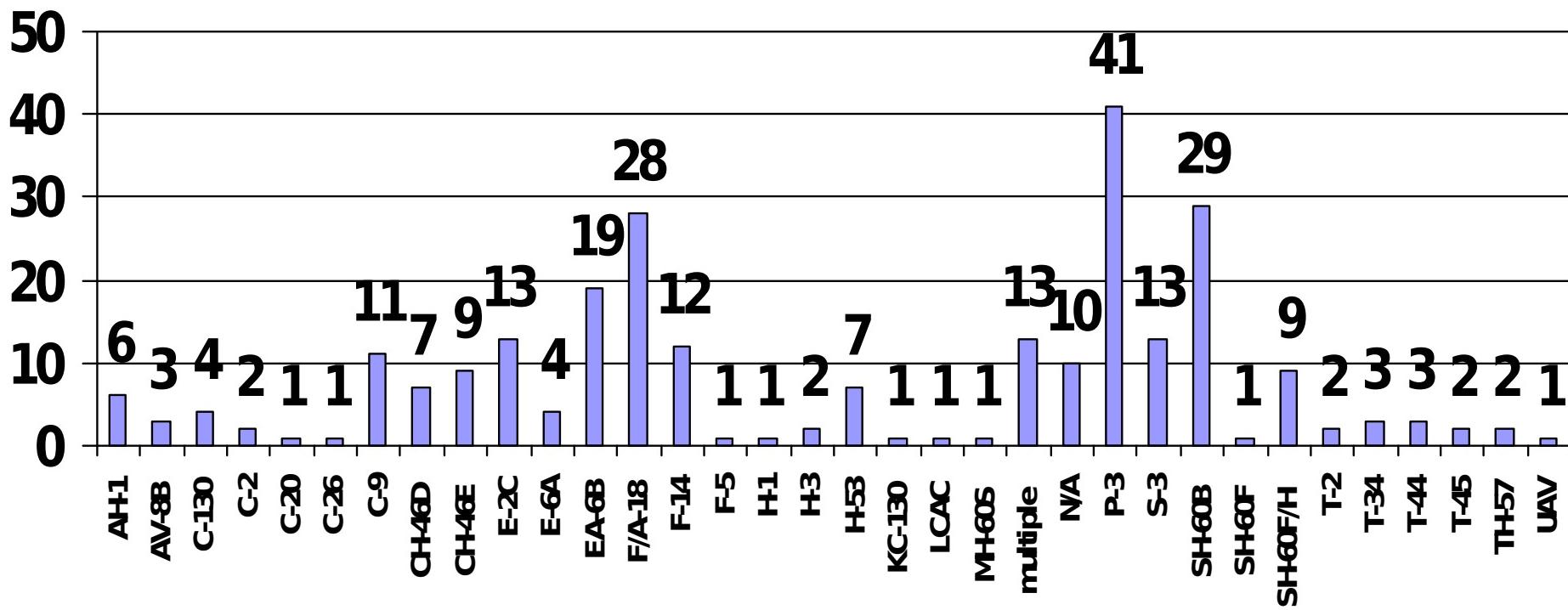
- ✓ CSA observations (aircrew)
 - ✓ **40% inadequate resources**
 - ✓ **59% commands over-committed**

**842 MCAS's (approx. 75,500
maintainers)**

- ✓ MCAS observations (maintenance personnel)
 - ✓ **37% “cutting corners” not discouraged**
 - ✓ **50% inadequate command safety recognition**
 - ✓ **31% ineffective pass-down between shifts**
 - ✓ **48% poor communication up / down chain of command**

Culture Workshops

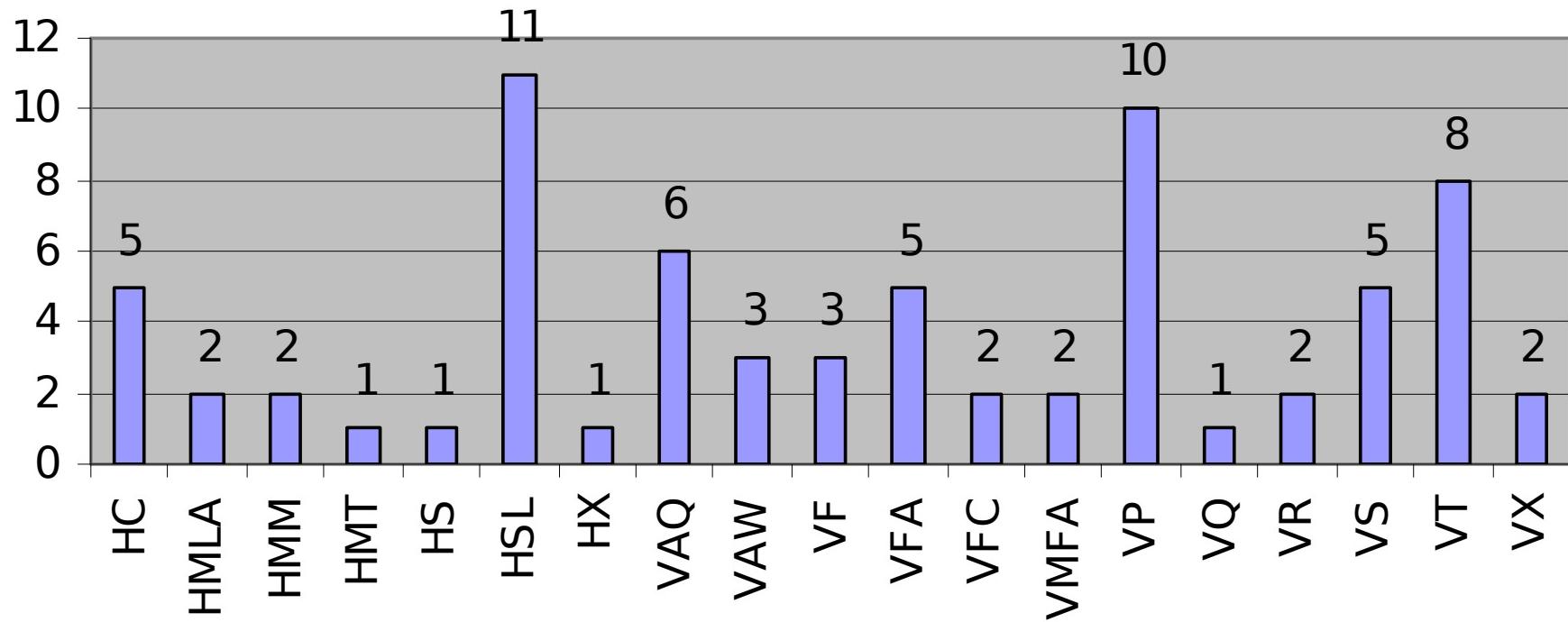
Completed By Aircraft Type Since FY01



Count

Culture Workshops

FY04 NUMBER OF WORKSHOPS BY COMMUNITY



ORM and the Fleet

COURSE S

● **Curriculum.** CNET, NSC, and NAVOSHTRACEN courses incorporate ORM into curricula.

● **Training.** Aviation, Afloat, and Submarine survey teams provide ORM refresher training upon request. Aviation, Afloat, and Submarine safety officer schools provide instructor-level ORM training.

PGO/PYO/DH schools, DIVO training, and Senior Enlisted Academy provide training.

ON-LINE

● **On-Line Training.** Offered through CNAF's ORM University and USMC MarineNet. Resources available on NSC website. Total Risk Assessment and Control System (TRACS) & U.S. Army Motor Vehicle Risk Assessment Tool (ASMIS).

ORM Works!

Transition to RM a Must.
Need it On and Off-Duty!

MISHAP RATES

1990
2000
2004



ORM Introduced to Fleet
Aviation Mishap Rates Declining
Afloat and Submarine Communities Show Improvements

PERSPECTIVE

"IN 1968, WE LOST 99 AMERICAN
SAILORS IN USS SCORPION,
WHICH WE THINK OF AS
A NATIONAL DISASTER;
WHILE WE LOST
103 SAILORS AND MARINES
IN PMV ACCIDENTS IN 1998,
AND CALL IT OUR 'BEST YEAR'!"

ROBERT B. PIRIE
ACTING SECRETARY OF THE NAVY
20 JANUARY - 24 MAY 2001

There are no memorials
to honor service members
who died in car accidents.

**WHY DO WE ACCEPT
MISHAPS?**



Status Check (PMV Fatalities)

1 year remains...

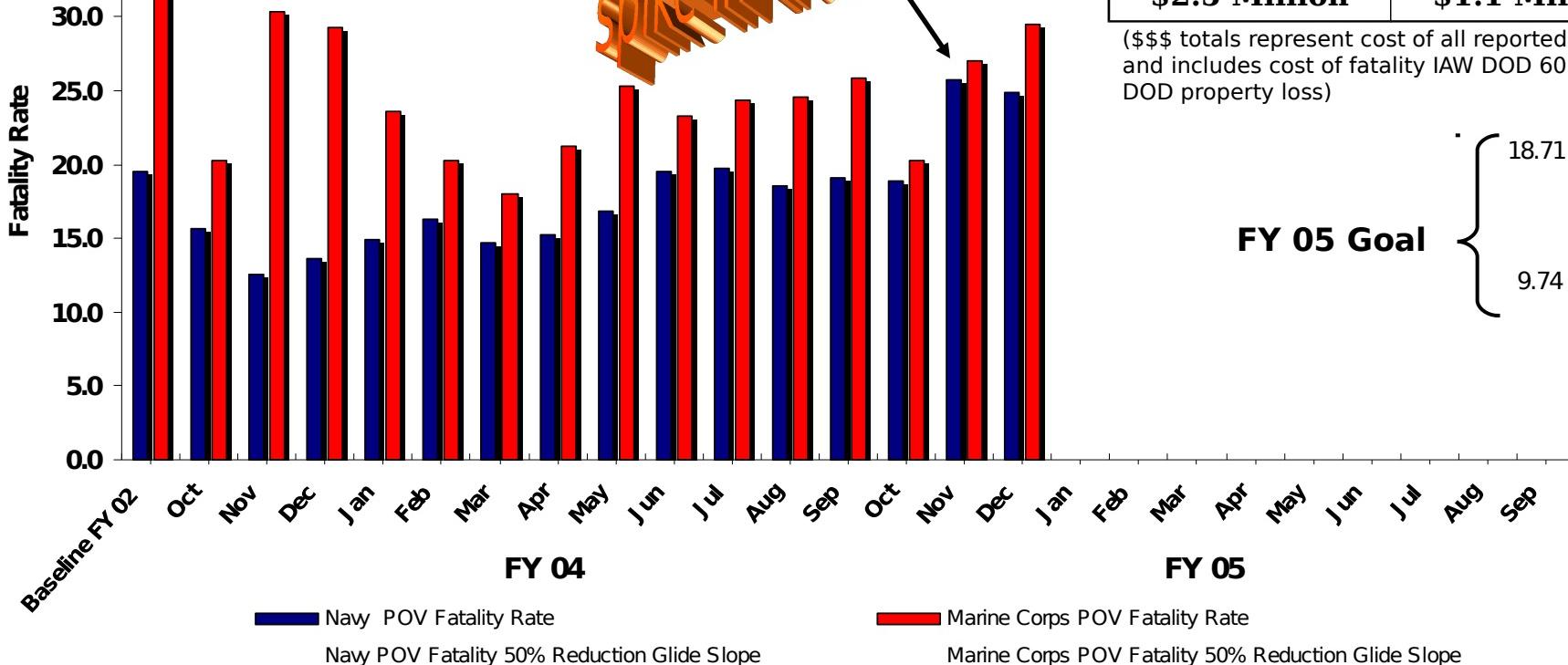
Top Causal Factors

WHEN

Nighttime Driving
Use
Weekends
Speed

WHY

No Seat Belt
Excessive
Alcohol
Fatigue



FY04 Losses	
USN	USMC
73 Fatalities	46 Fatalities
\$13 Million	\$11.6 Million
FY05 Losses	
USN	USMC
16 Fatalities	9 Fatalities
\$2.5 Million	\$1.1 Million

(\$\$\$ totals represent cost of all reported mishaps and includes cost of fatality IAW DOD 6055 and DOD property loss)

FY 05 Goal

18.71

9.74

Thanksgiving Holiday
spike in traffic mishaps

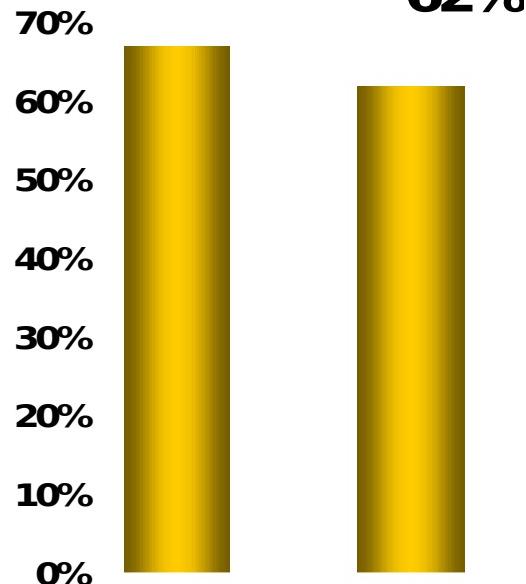
Factors in Traffic Deaths

USN/USMC, FY02-04

FY02-04 Deaths:

378

FY02: 140 FY03: 119 FY04: 119
67% 62%



FY05 Deaths:

25

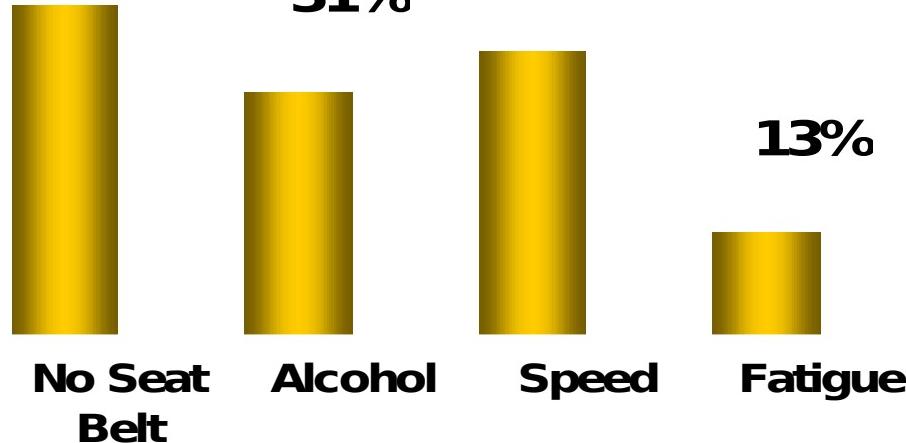
Where is the leadership?

42%

31%

36%

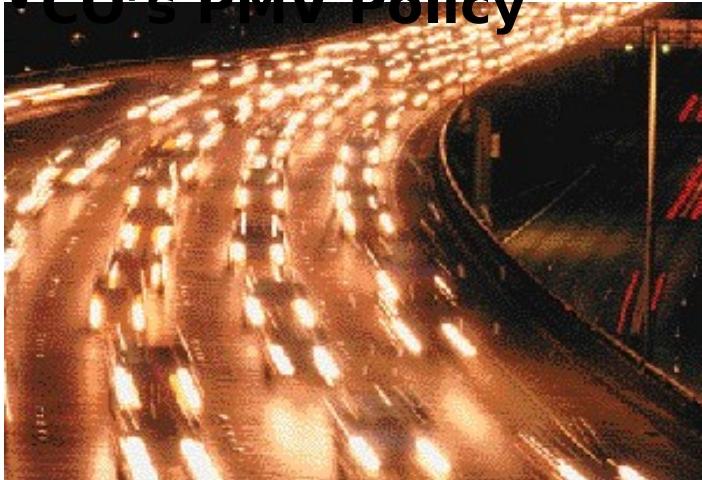
13%



Toolbox for Motor Vehicle Safety

(www.safetycenter.navy.mil/ashore/motorvehicle/downloads/toolbox.doc)

- Leave Chit Statement
- PMV Status Board
- Designated Driver / CMD Transport
- Pre-Trip Checklist / Brief / Counseling
- Calling card for emergencies
- CO's PMV Policy



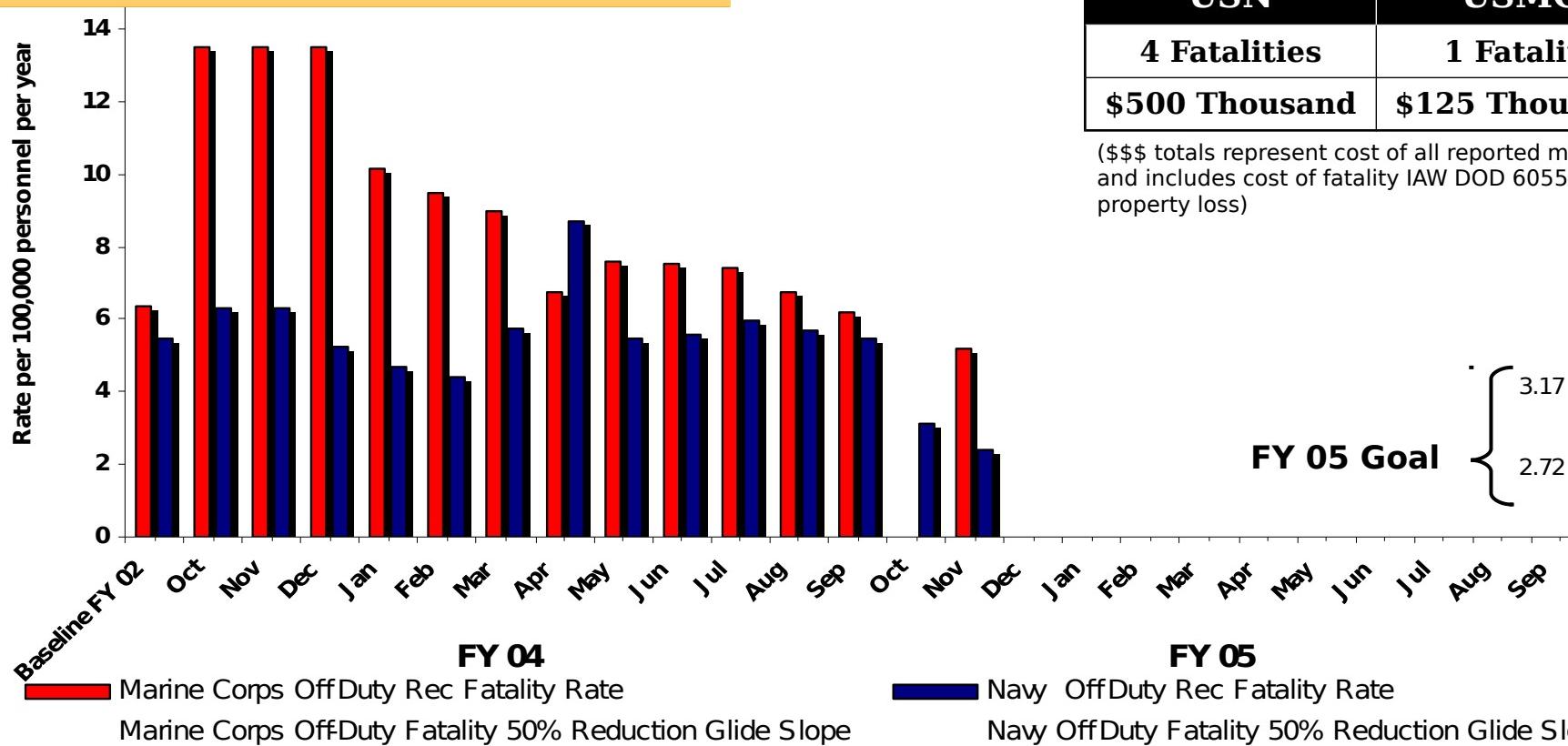
- PMV Safety Quiz
- Safety Standdowns / Seminars
- Pre - Holiday Briefs
- Newcomer orientation/Indoc
- Leave / Liberty request
- Crash Prevention Awards Program

Status Check (Recreation/Off-Duty Fatalities)

1 year remains...

Leading Causes of Deaths & Injuries

- Drowning
- Falls
- Outdoor Recreation
- Team and Outdoor Sports
- Water Sports (jet skis, motorboat)
- Negligent firearms discharge

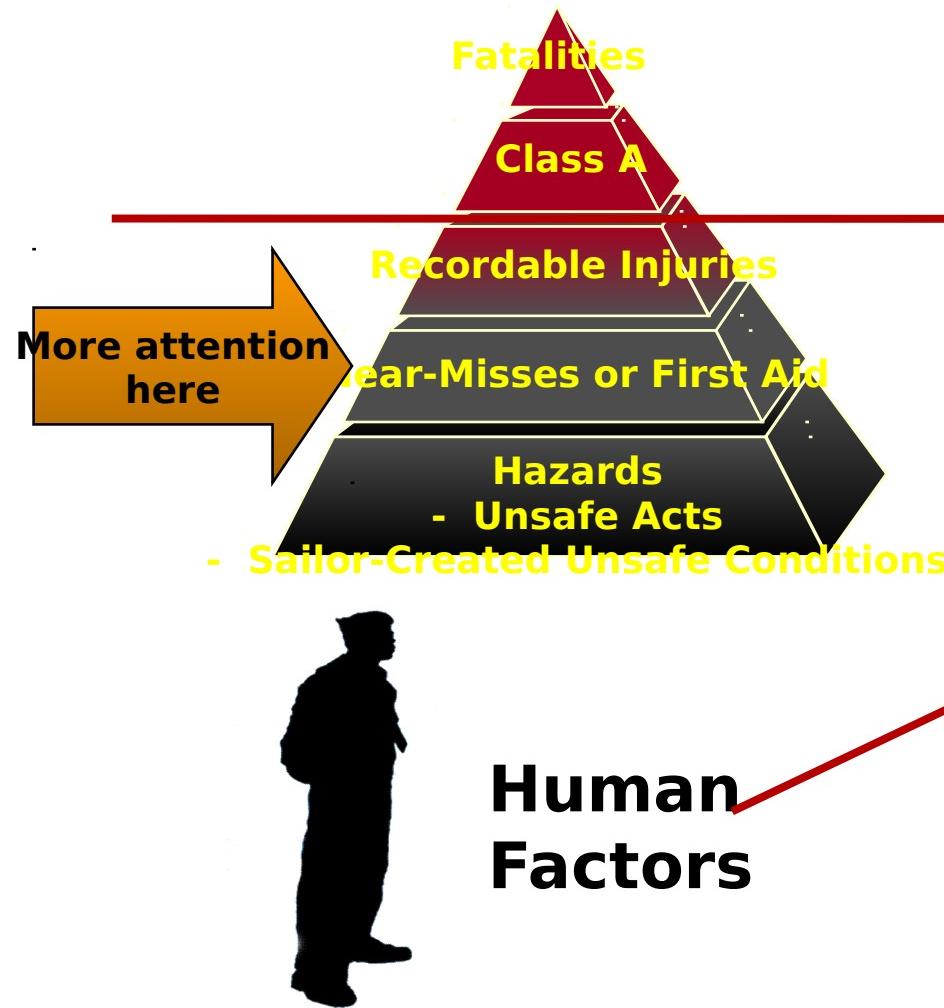


FY04 Losses	
USN	USMC
21 Fatalities	11 Fatalities
\$6.6 Million	\$2.9 Million
FY05 Losses	
USN	USMC
4 Fatalities	1 Fatality
\$500 Thousand	\$125 Thousand

(\$\$\$ totals represent cost of all reported mishaps and includes cost of fatality IAW DOD 6055 and DOD property loss)

NSC Data: 02 December 2004

Leaders Focus on Culture



How To Get There - What is “Actionable”

LEADERSHIP → CO sets the climate

1. Ensure you have a consistent “Safety Structure”
2. Mentor - On and Off duty
 - 2nd MAW Mentoring Program / Revise leave chits to a “contract”
 - What are your Sailors/Marines doing after hours?
 - The “leadership hungry” PO3
 - Look for the signs “Below the Waterline!”
3. ORM → RM
 - Take it off-duty (**ORM is not “THERE” yet**)
4. Awareness - Can we improve if Sailors don't know about Mishap Reduction Campaign???
5. Accountability - A Command with no PMV program?
6. Reporting - Hazreps? Class B, C,

A Class “A” is a Class “A” is a Class “A”.....

- Does a Parent “care” how their Son or Daughter died?

Are We Serious About Safety?

- Commander Accountability
 - Class A Flight Mishap vs. Class A PMV
 - Weak NATOPS program; No involvement; Bad climate
 - No PMV program; No mentorship; Bad climate
 - On and Off-Duty Responsibility
 - Proactive vs. Reactive
- Was it preventable?
- Human factors
- Command Safety “Structure”

***Safety “Climate” vs. Safety
“Nazi”***

We're Serious About Parts of Safety

THE BUILDING BLOCKS OF SAFETY



DESIRED END STATE

Every Sailor possesses an ever-present and intuitive safety awareness that he or she carries at all times - at sea, on deployment, at work, at home, on liberty and leave.

Is It Possible?

- “Platform” Type Mishaps - YES!
- “Off-Duty” Mishaps - HARD.
 - ***Can be done* - but *CHANGE* a *MUST!***
- ***Human Error - The “KEYS” of the realm***

What We Can Do for You

Naval Safety Center



Providing aviation, afloat, and shore support
to Navy and Marine Corps commands



NSC at your service... for free!

Let our experience, expertise and unrivaled commitment to safety work for you.

Mishap Investigations

Surveys

Assist Visits

Data Analysis

Workshops

Publications

Website

Presentations

Exhibits

Call 757-444-3520 (DSN 564) or visit our website: www.safetycenter.navy.mil

ON THE ROAD

- Culture workshops
- Unit surveys
- ORM unit training
- Mishap investigations
- USMC MTT seminars
- PCO briefings
- NAVOSHENVTRACEN Safety & Occupational Health Training

AWARENESS

- Fleet Analysis
- Magazines printed/distributed (473,000 copies)
- Interactive CD's
- Acquisition process in-roads
- Safety advisories
- Customer information requests (3,600+ database queries per month)
- Safety Center web page



Questions?

